

Amendments to the Drawing Figures

Enclosed are a Replacement Sheet and Annotated Marked-Up Drawing for Fig. 1. The lead lines for elements 35 and 36 have been extended.

Also **Enclosed** are a Replacement Sheet and Annotated Marked-Up Drawing for Fig. 3. The stitching 35 has been labeled.

REPLY

The Examiner objected to the drawings because the lead lines in the reference characters 35 and 36 in Fig. 1 point to the wrong element. **Enclosed** with this Amendment and Reply is a Replacement Sheet that corrects the lead lines on reference characters 35 and 36 in Fig. 1 to point to the correct element. For clarity, the stitching 35 has been included in Fig. 1. Support for including the stitching 35 in Fig. 1 can be found on page 8, lines 5-14 of the specification, and illustrated in Fig. 3. Additionally **enclosed** with this Amendment and Reply is a Replacement Sheet for Fig. 3 that more clearly labels the stitching 35.

The Examiner also objected to the drawings, indicating that the insertion bead 33 adapted to push against the tire bead as set forth in claims 1 and 16 must be shown or the feature canceled from the claims. It is respectfully submitted that this feature is shown or illustrated in Fig. 1. The insert bead 33 is attached to sidewalls 32 which are permitted to expand or move axially when the inner tube 70 is inflated. Accordingly, the insert bead 33 is forced axially toward the tire bead 61 so as to push up against it. The elements claimed are shown in the drawings. The operation of the invention, including the insert

bead 33 being pushed against the tire bead 61 during implementation of the invention, is clearly described and appreciated in view of the specification. Therefore, no further drawing amendment is believed to be necessary.

The Examiner objected to the Abstract of the Disclosure because of the use of the term "said". The Abstract of the Disclosure has been amended to delete the term "said". The Examiner also objected to the specification because the term "insert valve location" is not described in the specification. The claims have been rewritten to recite a "valve area". The valve area is disclosed as element 38 in Fig. 1, as well as described on page 8 of the specification.

The Examiner rejected claims 1-11 under 35 USC §112, second paragraph, as being indefinite. Claims 9 and 11 have been rewritten to delete the "insert valve location" language.

The Examiner rejected claims 1, 2, 12, and 16 under 35 USC §102(b) as being anticipated by Cho.

The Examiner rejected claims 3-8, 10, 13, and 14 under 35 USC §103(a) as being unpatentable over Cho.

However, the Examiner indicated that claims 9, 11, and 15 would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claim. Claims 9, 11, and 15 have been rewritten, placing them in independent form and should now be allowable.

Claims 1-8, 12-14, and 16 have been canceled. New claims 17-41 have been added.

Cho discloses a 3-chamber tire having a service chamber A and a high pressure chamber C. Both portions 11 extend outwardly and press beads 1, 2, 3 against rim 2.

The Cho document relates to a vehicle tire having three chambers. There is a separately inflatable high pressure chamber "C" which, when inflated, presses outwardly against the tire beads to press them against the wheel rim.

The main objective of the Cho system is to enable the tire to retain functionality in an emergency. The Cho system is addressing a different problem to the present invention.

The Cho document does not disclose or suggest provision of a separate beadlock having a casing and peripheral insert beads and which, in turn, encloses an inflatable inner tube for enabling its function of firmly retaining the vehicle tire beads against the wheel rim during low pressure operations, e.g. for off road uses where the tire footprint is deliberately increased. There is clearly no disclosure or suggestion in Cho of the flexible material bead spacer conforming to the contours of the wheel rim to provide the air passage from the inflation valve to the main tire air space.

Cho does not disclose or suggest the "four part" system of the present invention having vehicle tire, wheel rim, inflatable inner tube and bead lock.. The functions of the separate inflatable inner tube and the bead lock in the present invention are performed in Cho by the one member, namely the material of the high pressure chamber (C). However the separation of the inflation and the bead locking functions to be performed by separate members as in the present invention is not disclosed or suggested and indeed would not be necessary in the Cho system.

The inflatable chamber (C) disclosed in the Cho document is a specially manufactured item which clearly must be carefully manufactured to suit one particular wheel rim configuration (and probably also one particular wheel rim size (diameter and rim width)). The insert would necessarily be a relatively expensive item of manufacture. Installation of the Cho system would be difficult.

In contrast, the system according to the present invention enables a cheap, "off the shelf" inner tube to be used and the beadlock can be made of simple and cheap materials (woven polyester fabric for example), can be manufactured cheaply (being essentially a measuring, cutting and fabric stitching operation), can be readily installed without the need for meticulous care, and the same beadlock can be used with different rim widths and

different rim configurations since lateral expansion to effect the clamping or locking of the tire bead against the lips of the rim can still be effected over a range of axial distances. All of these advantages follow from the provision of the beadlock in the present invention which receives the separate inner tube therein and which has a flexible bead spacer to conform to the contours of the wheel rim and incompressibility to provide the air passageway.

New claim 17 recites a bead spacer that extends from the insert bead to the inflation valve area and is made of a material sufficiently flexible to substantially conform to the contours of the wheel rim. Cho does not disclose a bead spacer extending from the insert bead to an inflation valve area to define an air passage and that the bead spacer is flexible to conform to the contours of the wheel rim. The specifically claimed structure of the bead spacer as recited in new claim 17 is not disclosed in the references cited by the Examiner, and therefore, there would be no motivation whatsoever to modify Cho so as to obtain the structure as recited in new claim 17.

New dependent claim 19 additionally recites an inelastic circumferential band to limit radial expansion of the inner tube. This additional structure of an inelastic circumferential band so as to limit radial expansion is not disclosed in the references

cited by the Examiner and therefore should be additionally allowable.

New claim 33 recites a bead spacer of similar structure as recited in claim 17, and therefore should also be allowable.

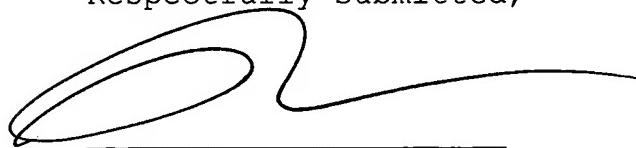
New method claim 38 includes limitations that are not disclosed in the references cited and therefore should also be allowable.

New claim 41 recites an insert casing comprising an inelastic circumferential band having attached flexible sidewalls and attached insert bead in combination with a flexible elongated spacer positioned between the attached insert bead and the tire bead adjacent the shoulder of the wheel rim and extending to a valve area. This combination of the insert casing having an inelastic circumferential band and a flexible elongated spacer forming a passage between the wheel rim and the tire bead, permitting an internal tire space adjacent the tire to be inflated separately from the inner tube, is not disclosed or suggested by the three chamber tire disclosed in Cho.

A certified copy of the priority document has been ordered and will be submitted in due course.

It is respectfully requested that the Examiner reconsider
the present application and forward the Notice of Allowance.

Respectfully submitted,



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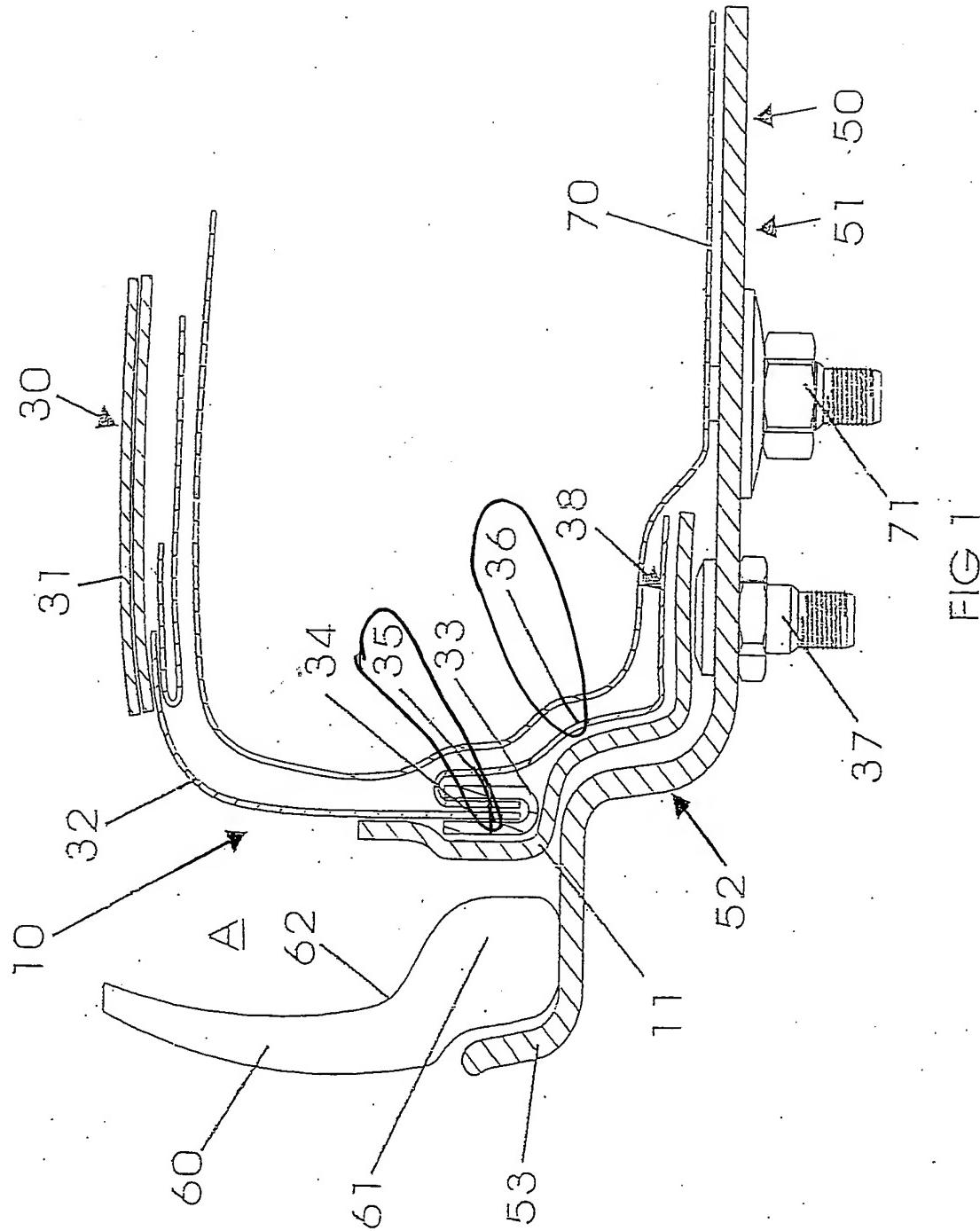


FIG 1

Annotated Marked-Up Drawings
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P-2525
3/17

